



2015 MAY 20 PH 12: 48

Tennessee Valley Authority, 1101 Market Street, Chattanooga, TN 37402-2801

May 7, 2015

RECEIVED

Mr. Barry Stephens, P.E. Director
Division of Air Pollution Control
Tennessee Department of Environment
and Conservation
Tennessee Tower William R. Snodgrass Building
312 Rosa L Parks Avenue
Nashville, Tennessee 37243

Dear Mr. Stephens:

TENNESSEE VALLEY AUTHORITY (TVA) – NORTON HILL MICROWAVE STATION - CONSTRUCTION APPLICATION FOR EMERGENCY GENERATOR

Please find enclosed the referenced construction permit application. This application is to construct one new 43.5 hp propane-powered emergency generator at TVA's Norton Hill Microwave Station.

If you have any questions or comments concerning this correspondence, please contact Jack Byars at (423) 751-2666 in Chattanooga, Tennessee.

Sincerely,

Billy R. Hall, Jr General Manager

Telecom and Control Systems

Enclosures

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CONSTRUCTION PERMIT APPLICATION FOR PROPANE ENGINE FOR EMERGENCY GENERATOR AT NORTON HILL MICROWAVE STATION

JACKSON, TENNESSEE

State of Tennessee Department of Environment and Conservation Division of Air Pollution Control
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor Nashville, TN 37243

Telephone: (615) 532-0554



2015 MAY 20 PM 12: 48

APC 100

NON-TITLE V PERMIT APPLICATION **FACILITY IDENTIFICATION**

Ple	ase type or print and subn	nit in duplicate for eac	h emission source. A	Attach appropriate sould	de cristical forans
	ase type or print and such		INFORMATION		Sector Memority Admis
 Organization's legal r Tennessee Valley Author Site name (if different 	ority (TVA) - Nortor			Eng. APC C	Company point no. 57-0404-61 .og/Permit no. 970314
3. Site address (St/Rd/F	Iwy.)			County name	1 100/7
Hwy 45 South				Madison	
City or distance to near	est town		Zip code	4. NAICS or S	IC code
Jackson, TN		3	88305	4911	
5. Site location (in lat, /long,)	Latitude 35.531	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Longitude -88.777	
	CON	TACT INFORMA	TION (RESPON	SIBLE PERSON)	
6. Responsible person/A Billy R. Hall, Jr. Mailing address (St./R 1101 Market Street, MR	ld./Hwy.)			Phone number with 423-751-6963 Fax number with a	
City Chattanooga		State TN	Zip code 37402	Email address brhall1@tva.go	DV
mile Partie	J. 1995	CONTACT INFO	RMATION (TE	CHNICAL)	Significant for the second
7. Principal technical co Taylor E. Korth	ntact		`	Phone number wit 423-751-3162	th area code
Mailing address (St./R 1101 Market Street, MR		.,		Fax number with a	area code
City Chattanooga		State TN	Zip code 37402	Email address tkorth@tva.gov	/
	77	CONTACT IN	FORMATION (B		
8. Billing contact Jack G. Byars				Phone number wit 423-751-2666	th area code
Mailing address (St/R 1101 Market Street, BR				Fax number with a 423-751-7011	area code
City Chattanooga		State TN	Zip code 37402	Email address jgbyars@tva.go	ον
		EMISSION SO	URCE INFORM	IATION	
9. Emission source no. (n PEG-1	umber which uniquely ide	entifies this source)			
10. Brief description of en 43.5 hp propane engine Model Year.		rator. Cummins (Generator Model	C20 N6. Cummins	Engine Model QSJ2.4. 2014
11. Normal operation:	Hours/Day 8.33	Days/We	ek	Weeks/Year	Days/Year
12. Percent annual throughput	Dec. – Feb. 25%	March – 25%	May	June – August	Sept. – Nov.

State of Tennessee Department of Environment and Conservation Division of Air Pollution Control William R. Snodgrass Tennessee Tower 312 Rosa L. Parks Avenue, 15th Floor Nashville, TN 37243 Telephone: (615) 532-0554



NON-TITLE V PERMIT APPLICATION PROCESS OR FUEL BURNING SOURCE DESCRIPTION

	mit in duplicate and attach to the			Form (APC 100)
GE	NERAL IDENTIFICATI	ON AND DESCRIPTION	N	
1. Organization name Tennessee Valley Authority (TVA) - Oswa	ld Dome Microwave Sta	ition For		C Company – Point no.
2. Emission source no. (As on Non-Title V Facility	/ Identification Form)	APC use	APO	C Log/Permit no.
PEG-1		only		
3. Description of process unit		,,,,,		
43.5 hp propane engine for emergency gene	erator. Cummins Engine	e Model QSJ2.4. 2014	Model	Year.
P	ROCESS SOURCE DES	CRIPTION AND DATA	A III	وليد وابتاراها وناتتك وتوويته
4. Type of source			(Ch	eck only one option below)
Process Source: Apply for a separate Permit for each	source. (Check at right and co	mplete lines 5, 6, and 11)		()
Process Source with in process fuel: Products of com Apply for a separate permit for each source. (Check a	bustion contact materials heate at right and complete lines 5, 6.	ed. , and 8 through I1)		()
Non-Process fuel burning source: Products of combust Complete this form for each boiler or fuel burner and (APC 101) for each stack. (Check at right and complete the complete	complete a Non-Title V Emis	heated, sion Point Description Form		(🗙)
5. Type of operation: Continuous ()	Batch ()	Normal batch time	Nor	mal batches/day
6. Process material inputs and	Diagram reference		nput rate	s (pounds/hour)
In-process solid fuels		Design		Actual
\mathbf{A}_{i}				
В,				
C.	6			
D.	,			
E.				
F.				
G.				
	Totals			

(Over)

^{*} A simple process flow diagram must be attached.

Date construction permit Date construction started Date completed Last permit no Emission source refinence number		T	PE OF PE	RMIT REQUESTED	UJA WIE	AND DESCRIPTION	APC
Construction permit (X) If you choose Construction permit, then choose either New Construction, Modification, or Location transfer (X) July 2015 Modification Date modification started or will start Location transfer (x) July 2015 Date completed or will complete Location transfer (x) July 2015 Date completed or will complete Location transfer (x) Date modification started or will start Date completed or will complete (x) Date modification started or will start Date completed or will complete (x) Date completed or will complete (x) Date completed or will complete SIGNATURE Based upon information and belief formed after a reasonable inquiry, I, as the responsible person of the above mentioned facility, certify that information contained in this application and any articled application by a security and true to the best of my knowledge. As specified in TC section 39-16-792(a)(4), this decignation is made under penalty of perjury. Signar's name (type of print) Table of Pollution Reduction Device or Method Codes Table of Pollution Reduction Device or Me	13. Operating permit				Las	t permit no	Emission source refer
PEG-1 New Construction permat, then choose either New Construction, Modification, or Location transfer Completion date July 2015 July 2015 July 2015 Date completed or will complete (*) Date modification started or will start Date completed or will complete (*) Location transfer Transfer date Address of last location	()	Date construction starte	.	ne completed	Bus	permit no.	
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If you choose Construction permit, then choose either New Construction, Modification, or Location transfer New Construction Starting date	·	East permit no.					nee nameer
New Construction New Constru		sound then shoos sith a New	Camanania	Madificación - Lancia -		J-1	
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A. Describe changes that have been made to this equipment or operation since the last construction or operating permit applications:		Location transfer	Tra	ansfer date		Address of last lo	neation
4. Describe changes that have been made to this equipment or operation since the last construction or operating permit application: **JA** **SIGNATURE** 3ased upon information and belief formed after a reasonable inquiry, I, as the responsible person of the above mentioned facility, certify than formation contained in this application and any attached application(s) is accurate and true to the best of my knowledge. As specified in TC section 39-16-702(a)(4), this declaration is made under penalty of perjury. 5. **Signature** (application** be supported for it will be processed)** **Signature** (application** be supported for it will be processed)** **Signature** (application** be supported for it will be processed)** **Date** **Date** **Date** **Date** **Date** **Date** **Date** **Date** **Phone number with area code** 423-751-6963 **Table of Pollution Reduction Device or Method Codes** **Teb core of the below codes lift, use 999 as a code for other and specify in the comments.** **Equipment** **Date** **Date			170	misior date		Address of last io	cation
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SIGNATURE Based upon information and belief formed after a reasonable inquiry, I, as the responsible person of the above mentioned facility, certify that notormation contained in this application and any attached application(s) is accurate and true to the best of my knowledge. As specified in TO certification and any attached application(s) is accurate and true to the best of my knowledge. As specified in TO certification and any attached application(s) is accurate and true to the best of my knowledge. As specified in TO certification and any attached application(s) is accurate and true to the best of my knowledge. As specified in TO certification and any attached application is made under penalty of perjury. 5. Signature (application for the penalty of perjury). 5. Signature (application for penalty with the penalty of penalt							
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calytic Oxidation – Flue Gas Desulfurization	High: 95-99+%. Me he system has several pieces of co none of the below codes fit, use 99 Equipment tivated Carbon Adsorption erburner – Direct Flame erburner – Direct Flame with Hea erburner – Catalytic	edium: 80-95% connected control equipment, in 99 as a code for other and speci	atic precipitate And Low: Les dicate the sequ ify in the community	ors; the efficiency ranges coss than 80%. uence, For example: 008'01 ments. Limestone Injection – Liquid Filtration Syst Mist Eliminator – Hig Mist Eliminator – Lov	orrespond 0.97% - Dry - Wet gh Velocit	y	
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ric Filter – Medium Temperature 017 Other Enclosures) ric Filter – Low Temperature 018 Venturi Scrubber (Gaseous Control Only) ric Filter – Metal Screens (Cotton Gins) 059 Wet Scrubber – High Efficiency ring 023 Wet Scrubber – Medium Efficiency s Adsorption Column – Packed 050 Wet Scrubber – Low Efficiency s Adsorption Column – Tray Type 051 Wet Suppression by Water Sprays s Scrubber (General: Not Classified) 013 Table of Emission Estimation Method Codes application / Emissions are known to be zero 0 issions based on source testing 0 issions based on material balance using engineering expertise and knowledge of process 02 issions calculated using emission factors from EPA publications No. AP-42 Compilation of Air Pollution Emissions Factors 3	High: 95-99+%. Me he system has several pieces of co none of the below codes fit, use 99 Equipment	edium: 80-95% connected control equipment, in 29 as a code for other and special exchanger at Exchanger at Exchanger alfurization lizers or Wetting Agents iciency	atic precipitate And Low: Lee dicate the sequ ify in the comi	cors; the efficiency ranges coss than 80%. Limestone Injection – Limestone Injection – Liquid Filtration Syst Mist Eliminator – Hig Mist Eliminator – Lor Process Change Process Gas Recovery Settling Chamber – H Settling Chamber – N Settling Chamber – L Spray Tower (Gaseous Sulfuric Acid Plant – Sulfuric Acid Plant –	orrespond 0,97% - Dry Wet Wet.	y ency ficiency ency	00 00 00 00 00 00 00 00 00 00 00 00 00
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Table of Emission Estimation Method Codes t application / Emissions are known to be zero	High: 95-99+%. Me the system has several pieces of co- none of the below codes fit, use 99 the Equipment. Sequipment. Se	edium: 80-95% connected control equipment, in 99 as a code for other and special speci	atic precipitate And Low: Lee dicate the sequ ify in the comi	cors; the efficiency ranges coss than 80%. Limestone Injection - Limestone Injection - Liquid Filtration Syst Mist Eliminator - Hig Process Gas Recovery Settling Chamber - H Settling Chamber - H Settling Chamber - L Spray Tower (Gaseou Sulfuric Acid Plant - Sulfuric Acid Plant - Sulfuric Acid Plant - Sulfur Plant Vapor Recovery Syste Other Enclosures Venturi Scrubber (Ga Wet Scrubber - High Wet Scrubber - Medi Wet Scrubber - Low	orrespond 0,97% - Dry Wet Wet gh Velocit w Velocit w Velocit sis Control Contact P Double C	y ency ficiency ency. Only) rocess ontact Process ding Condensers, H	00000000000000000000000000000000000000
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gment	High: 95-99+%. Me he system has several pieces of co none of the below codes fit, use 99 Equipment	edium: 80-95% connected control equipment, in 29 as a code for other and special equipment at Exchanger cochanger. Ilizers or Wetting Agents iciency ciency	atic precipitate And Low: Les dicate the sequ ify in the comm	cors; the efficiency ranges coss than 80%. Lence, For example: 008'01 ments. Limestone Injection - Liquid Filtration Syst Mist Eliminator - Hig Mist Eliminator - Lo: Process Change Process Gas Recovery Settling Chamber - H Settling Chamber - W Settling Chamber - Lo: Spray Tower (Gaseou Sulfuric Acid Plant - Sulfuric Acid Plant - Sulfuric Acid Plant - Sulfuric Acid Plant - Sulfuric Sulfuric Syst Other Enclosures Venturi Scrubber (Ga Wet Scrubber - High Wet Scrubber - Hodi Wet Scrubber - Low Wet Suppression by V	orrespond 0.97% - Dry Wet W	ency ficiency ency Only) rocess ontact Process ding Condensers, H atrol Only).	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
ssions calculated using a special emission factor different from that in AP-425	High: 95-99+%. Me he system has several pieces of co none of the below codes fit, use 99 Equipment tivated Carbon Adsorption. terburner – Direct Flame terburner – Direct Flame with Hea terburner – Catalytic terburner – High Efficiency telone – High Efficiency telone – Low Efficiency teloner – High Temperature tertostatic Precipitator – Medium Ficurostatic Precipitator – Low Efficiency teloner – High Temperature teric Filter – Medium Temperature teric Filter – Medium Temperature teric Filter – Metal Screens (Cotton ting teloner – Metal Screens (Cotton ting teloner – Not Classifie teloner – Scrubber (General: Not Classifie teloner – Medium – Tray Type teloner – Tray Type telon	edium: 80-95% connected control equipment, in 29 as a code for other and special exchanger. It Exchanger. Ilizers or Wetting Agents iciency. Efficiency. Efficiency. ciency. and Gins). Table of the control equipment, in 29 as a code for other and special exchanger. Table of the control equipment, in 29 as a code for other and special exchanger.	atic precipitate And Low: Lee dicate the sequ ify in the commode	cors; the efficiency ranges coss than 80%. Limestone Injection - Limestone Injection - Liquid Filtration Syst Mist Eliminator - Hig Mist Eliminator - Lor Process Change Process Gas Recovery Settling Chamber - H Settling Chamber - H Settling Chamber - L Spray Tower (Gaseous Sulfuric Acid Plant - Sulfuric Acid Plant - Sulfuric Acid Plant - Sulfuric Acid Plant - Sulfur Plant Vapor Recovery Syste Other Enclosures Venturi Scrubber - High Wet Scrubber - High Wet Scrubber - Low Wet Suppression by V	orrespond 0,97% - Dry Wet	y	CO C

State of Tennessee
Department of Environment and Conservation
Division of Air Pollution Control
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243
Telephone: (615) 532-0554



NON-TITLE V PERMIT APPLICATION EMISSION POINT DESCRIPTION

Please type or print	and submit in d	uplicate for each	stack or emi	ssion sou	urce, Attach to the No	n-Title	V Facility Ide	ntification Form (Al	PC 100).
		GENERA	L IDENTII	FICAT	ION AND DESCR	IPTIC	ON		
1. Organization name							For	APC Company por	int no.
Tennessee Valley Authori	ity (TVA) - (Oswald Dome	e Microwa	ve Stat	ion		APC		
2. Emission source no. (As or	n Non-Title V F	acility Identification	ation Form)	Flow	diagram point number		use only	APC Log/Permit n	0.
PEG-1				N/A			omy		
3. Brief emission point descr	ription (Attach a	a sketch if appro	priate):					Distance to nearest	property line (Ft.)
43.5 hp propane engine fo	or emergency	generator. (Cummins E	Engine	Model QSJ2.4. 2	2014 N	Iodel Yr		
3-500	10 miles	The same	STACK A	ND EM	IISSION DATA	L 1			W. J. L. L.
4. Stack or emission point	Height above	grade (Ft.)	Diameter (Temperature (°F)	% of t	ime over 125°		
data:								(Up, down or I	norizontal)
\rightarrow	4				1144				
Data at exit conditions:	Flow (actual 1	Ft. ³ /Min.)	Velocity (I	Ft,	Moisture (Grains/F	t. ³)		Moisture (Perc	cent)
\rightarrow	110.7		/Sec.)						
Data at standard conditions:	Flow (Dry sto	l Ft 3/Min)	Velocity (F	₹t;	Moisture (Grains/F	i.")		Moisture (Perc	eent)
conditions.			,,,,,,						
→ ·			Actual emiss				0		1
5. Air contaminants	Fii	(I la = /II a)	Actual elliss	SIUIIS					
	Emission	s (Lbs./Hr.)	1				D 1 1		0 . 1
	Average	Maximum	Concer	ntration	Avg_emissio (Tons/Yr_)	ns	Emissions es method code	(2)	Control efficiency%
Particulate matter	0.0147	0.0147	**		7.34E-04		5		
Sulfur dioxide (SO ₂)			***						
	0.00103	0.00103			5.14E-05		5		
Carbon monoxide (CO)	37.1	37.1	PPM		1.86		5		
Organic compounds			PPM						
Nitrogen oxides (NOx) +	0.959	0.959	PPM		0.0479		5		
Hydrocarbons Fluorides	0.939	0.939			0.0477	-			
Fluorides									
Greenhouse gases (CO ₂ equivalents)	37.6	37.6			1.88		5		
Hazardous air pollutant (specify)									
Hazardous air pollutant (specify)									
Other (specify)			-						
Other (specify)									
Other (specify)									

			BOILER	R, BURNER, GE	NERATOR	R, OR S	IMILAI	R FUEL B	URNI	NG PR	OCESS DESCR	IPTIC	ON
7.		ırner	data: (Cor	mplete lines 7 to 11		ate form	for each	boiler, burne	r, etc.)				
Nui	nber	Stac	k iber**	Type of firing**	*		Rated he	orsepower	capac	l input city 3TU/Hr.)	Other rating (specify capa	Other rating (specify capacity and units)	
		PEG	3 - 1	Internal Comb	oustion		43.5		0.270				
Ser	ial no.		Date con	structed	Date manufa	actured		Date of las	st modi	fication (explain in commen	ts belo	w)
	July/2015 July/2015												
	*** Cyclone	, spre	ader (with	ack will have the sa or without reinjecti (describe below in	on), pulverize	nber. ed (wet o	r dry bott	om, with or	without	t reinjecti	ion), other stoker (s	pecify	type, hand fired,
1741	5 13	11 5	FUEL U	SED IN BOILE	R, BURNE	R, GEN	VERATO	OR, OR SI	MILA	R FUE	L BURNING SO	OURC	E
8.	Fuel data: (Comp	lete for a p	process source with	in process fue	el or a no	n-process	fuel burnin	g sourc	e)			
	Primary fuel	type	(specify) p	ropane				Standl	by fuel	type(s) (s	specify)		
	Fuels used			Annual usage		Hourly (9/		%	BTU value		(For APC use only)
					Desig		Average			Ash	of fuel	Ш	SCC code
	Natural gas:			10 ⁶ Cu. Ft.	Cu. Ft.		Cu. Ft.	11		/ / / / /	1,000		
	#2 Fuel oil:			10 ³ Gal.	Gal	G	fal.			/- /- / / /			
	#5 Fuel oil:			10 ³ Gal.	Gal.	G	al.			1 / 1 / 1 /			
:	#6 Fuel oil:			10 ³ Gal.	Gal.	G	ial.			11		П	
	Coal:			Tons	Lbs.	L	bs.			100			
	Wood:			Tons	Lbs.	L	bs.	111		11			
	Liquid propa	ne		10 ³ Gal.	Gal.	G	al.	111	/ /	11		\vdash	
				0.294	2.94	2.	94	/ / /	′ /	11	92,000		
	Other (specifunits):	y type	: &										
9.	If Wood is u	sed a	s a fuel, sp	ecify types and es	timate percer	it by we	ight of ba	rk					
10.	If Wood is u	sed w	ith other f	fuels, specify perce	ent by weight	of wood	l charged	to the burn	ier.				
11	Comments												
11.	Comments												
													R:

6.	Check types of n	nonitoring and recording inst	ruments that are attach	ed:		
	Opacity monitor), SO ₂ monitor (), NO _X monitor (), Other (specify in comments) ()	
7.	Comments					
8. Co	ontrol device or	Description of operating para	neters of device (flow ra	te, temperature, pressure drop, etc.):		
	od code	= company or operating parts		, temperature, pressure arep, etc.).		
desci	ription:					
		000				
					41	

- Refer to the tables below for estimation method and control device codes.
- ** Exit gas particulate matter concentration units: Process Grains/Dry Standard Ft³ (70°F), Wood fired boilers Grains/Dry Standard Ft³ (70°F), all other boilers Lbs. /Million BTU heat input.
- *** Exit gas sulfur dioxide concentrations units: Process PPM by volume, dry bases, and boilers Lbs. /Million BTU heat input

<u>Table of Pollution Reduction Device or Method Codes</u> (Alphabetical listing)

Note: For cyclones, settling chambers, wet scrubbers, and electrostatic precipitators; the efficiency ranges correspond to the following percentages:

High: 95-99+%.

Medium: 80-95%

And Low: Less than 80%.

If the system has several pieces of connected control equipment, indicate the sequence, For example: 008'010.97%

If none of the below codes fit, use 999 as a code for other and specify in the comments.

No Equipment	000	Limestone Injection Dry	041
No Equipment Activated Carbon Adsorption	048	Limestone Injection – Dry Limestone Injection – Wet	
Afterburner – Direct Flame	021		
		Liquid Filtration System	014
Afterburner – Direct Flame with Heat Exchanger	010	Mist Eliminator – High Velocity	014
Afterburner – Catalytic		Mist Eliminator – Low Velocity	
Afterburner – Catalytic with Heat Exchanger		Process Change	
Alkalized Alumina	040	Process Enclosed	054
Catalytic Oxidation - Flue Gas Desulfurization	039	Process Gas Recovery	060
Cyclone - High Efficiency	007	Settling Chamber – High Efficiency	004
Cyclone – Medium Efficiency		Settling Chamber - Medium Efficiency	005
Cyclone – Low Efficiency	009	Settling Chamber - Low Efficiency	006
Dust Suppression by Chemical Stabilizers or Wetting Agents	062	Spray Tower (Gaseous Control Only)	052
Electrostatic Precipitator – High Efficiency	010	Sulfuric Acid Plant - Contact Process	
Electrostatic Precipitator – Medium Efficiency	011	Sulfuric Acid Plant - Double Contact Process	044
Electrostatic Precipitator – Low Efficiency	012	Sulfur Plant	045
Fabric Filter – High Temperature		Vapor Recovery System (Including Condensers, Hooding and	
Fabric Filter – Medium Temperature		Other Enclosures)	047
Fabric Filter – Low Temperature	018	Venturi Scrubber (Gaseous Control Only)	
Fabric Filter – Metal Screens (Cotton Gins)	059	Wet Scrubber - High Efficiency	
Flaring	023	Wet Scrubber – Medium Efficiency	002
Gas Adsorption Column Packed	050	Wet Scrubber - Low Efficiency	003
Gas Adsorption Column – Tray Type	051	Wet Suppression by Water Sprays	
Gas Scrubber (General: Not Classified)	013		
,			

Table of Emission Estimation Method Codes

Not application / Emissions are known to be zero	(
Emissions based on source testing	.]
Emissions based on material balance using engineering expertise and knowledge of process	2
Emissions calculated using emission factors from EPA publications No. AP-42 Compilation of Air Pollution Emissions Factors	3
udgment	
Emissions calculated using a special emission factor different from that in AP-42	5
Other (Specify in comments)	6

Table 1. Small Emergency Propane Generator Engine at Oswald Dome Microwave Station in Reliance, Tennessee

Emission Source				Oswald Dome Mic	rowave Station Engine
Engine Model Year					2015
Propane Engine Horsepower, hp*					43.5
Propane Fuel Heat Content, Btu/gal				9	2,000
Propane Fuel Use, gal/hr*					2.94
Propane Engine Heat Input Rating, MMBtu/hr				().270
Potential Annual Hours of Operation, hr**					100
	US EPA				
	Emission Standards	Emission Factor***	Emission Factor****	Em	nissions
	g/hphr	lb/1000 gal	lb/MMBtu	lb/hr	ton/yr**
Particulate Matter (PM ₁₀)		5		0.0147	7.34E-04
Nitrogen Oxides (NOx) + Hydrocarbons (HC)	10			0.959	0.0479
Carbon Monoxide (CO)	387			37.1	1.86
Sulfur Dioxide (SO ₂)		0.35		0.00103	5.14E-05
Carbon Dioxide Equivalent (CO ₂ e)			139.2	37.6	1.88

^{*} Based on information from manufacturer, Cummins Power Generation.

^{**} Potential annual emissions based on 100 hours per year of operation. This is not a permit restriction.

^{***} San Diego Air Pollution Control District, Air Toxics Section (6/99), Uncontrolled Propane Fired Internal Combustion Engine.

^{****} CO_2 factor is 62.87 kg CO_2 /MMBtu, CH_4 factor is 0.003 kg CH_4 /MMBtu, N_2O factor is 0.0006 kg N_2O /MMBtu.

 CO_2 equivalent factor for CO_2 is 1, CO_2 equivalent factor for CH_4 is 25, CO_2 equivalent factor for N_2O is 298.

